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SEQUENCE LISTING

<110> Hubbell, Jeffrey A.
Elbert, Donald
Lutolf, Matthias
Pratt, Alison
Schoenmakers, Ronald
Tirelli, Nicola
Vernon, Brent

<120> BIOMATERIALS FORMED BY NUCLEOPHILIC ADDITION REACTION TO CONJUGATED
UNSATURATED GROUPS

<130> 50154/002002

<140> 09/496,231

<141> 2000-02-01

<150> 60/118,093

<151> 1999-02-01

<160> 72

<170> FastSEQ for Windows Version 4.0

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<223> Based on Homo sapiens

<221> VARIANT

<222> (1)...(10)

<223> Xaa is any amino acid except Cys.

<400> 1

Tyr Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Tyr
1 5 10

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<221> VARIANT

<222> (1)...(8)

<223> Xaa is any amino acid except Cys.

<400> 2

Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys

1 5
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 <220>
 <223> Based on Homo sapiens

 <221> VARIANT
 <222> (1)...(6)
 <223> Xaa is any amino acid except Cys

 <400> 3
 Xaa Xaa Xaa Xaa Xaa Xaa
 1 5

 <210> 4
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 <221> VARIANT
 <222> (1)...(13)
 <223> Xaa is any amino acid except Cys

 <400> 4
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 1 5 10

 <210> 5
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 <223> Xaa is any amino acid except Cys

 <400> 5
 Cys Xaa Xaa Xaa Xaa Xaa Cys
 1 5

 <210> 6
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 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

<221> VARIANT
<222> (1)...(15)
<223> Xaa at positions 2-6 and 8-12 is any amino acid except Cys or Tyr; Xaa at position 1 is acetylated Tyr

<400> 6
Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Xaa Xaa Tyr
1 5 10

<210> 7
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<221> VARIANT
<222> (1)...(5)
<223> Xaa is any amino acid except Cys or Tyr

<400> 7
Xaa Xaa Xaa Xaa Xaa
1 5

<210> 8
<211> 6
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<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 8
Gly Pro Arg Val Val Glu
1 5

<210> 9
<211> 6
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<220>
<223> Based on Homo sapiens

<400> 9
Asn Asn Arg Asp Asn Thr
1 5

<210> 10
<211> 6
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<220>
<223> Based on Homo sapiens

<400> 10
Tyr Asn Arg Val Ser Glu
1 5

<210> 11
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<220>
<223> Based on Homo sapiens

<400> 11
Gln Met Arg Met Glu Leu
1 5

<210> 12
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<220>
<223> Based on Homo sapiens

<400> 12
Gly Phe Arg His Arg His
1 5

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<223> Based on Homo sapiens

<400> 13
Gly Tyr Arg Ala Arg Pro
1 5

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<220>
<223> Based on Homo sapiens

<400> 14
Tyr Gln Lys Asn Asn Lys
1 5

<210> 15
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<220>
<223> Based on Homo sapiens

<400> 15
Leu Ile Lys Met Lys Pro
1 5

<210> 16
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<220>
<223> Based on Homo sapiens

<400> 16
Asn Phe Lys Ser Gln Leu
1 5

<210> 17
<211> 6
<212> PRT
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<220>
<223> Based on Homo sapiens

<400> 17
Glu Trp Lys Ala Leu Thr
1 5

<210> 18
<211> 6
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<220>
<223> Based on Homo sapiens

<400> 18
Ser Tyr Lys Met Ala Asp
1 5

<210> 19
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 19
Thr Gln Lys Lys Val Glu
1 5

<210> 20

<211> 6
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 20
 Arg Gln Lys Gln Val Lys
 1 5

 <210> 21
 <211> 5
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <400> 21
 Gln Val Lys Asp Asn Glu
 1 5

 <210> 22
 <211> 6
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <400> 22
 Leu Ile Lys Ala Ile Gln
 1 5

 <210> 23
 <211> 6
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <400> 23
 Thr Leu Lys Ser Arg Lys
 1 5

 <210> 24
 <211> 6
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 24
 Ser Arg Lys Met Leu Glu

1 5

<210> 25
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens, Bos taurus, and Gallus gallus

<400> 25
 Pro Gln Gly Ile Ala Gly
 1 5

<210> 26
 <211> 6
 <212> PRT
 <213> Bos taurus

<400> 26
 Pro Gln Gly Leu Leu Gly
 1 5

<210> 27
 <211> 6
 <212> PRT
 <213> Gallus gallus

<400> 27
 Pro Gln Gly Ile Leu Gly
 1 5

<210> 28
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Gallus gallus and Homo sapiens

<400> 28
 Pro Gln Gly Leu Ala Gly
 1 5

<210> 29
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 29
 Pro Leu Gly Ile Ala Gly
 1 5

<210> 30
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 30
Pro Leu Gly Leu Trp Ala
1 5

<210> 31
<211> 6
<212> PRT
<213> Homo sapiens

<400> 31
Pro Leu Gly Leu Ala Gly
1 5

<210> 32
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 32
Gly Pro Gln Gly Ile Ala Gly Gln
1 5

<210> 33
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 33
Gly Pro Val Gly Ile Ala Gly Gln
1 5

<210> 34
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 34
Gly Pro Gln Gly Val Ala Gly Gln
1 5

<210> 35
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 35
Gly Pro Gln Gly Arg Ala Gly Gln
1 5

<210> 36
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 36
Gly Pro Gln Gly Ile Ala Ser Gln
1 5

<210> 37
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 37
Gly Pro Gln Gly Ile Phe Gly Gln
1 5

<210> 38
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 38
Gly Pro Gln Gly Ile Trp Gly Gln
1 5

<210> 39
<211> 4
<212> PRT
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<220>
<223> Based on Homo sapiens

<400> 39
Arg Gly Asp Ser
1

<210> 40
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 40
Arg Glu Asp Val
1

<210> 41
<211> 4
<212> PRT
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<220>
<223> Based on Homo sapiens

<400> 41
Arg Gly Asp Val
1

<210> 42
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 42
Leu Arg Gly Asp Asn
1 5

<210> 43
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 43
Ile Lys Val Ala Val
1 5

<210> 44
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 44
Tyr Ile Gly Ser Arg
1 5

<210> 45

<211> 5
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <400> 45
 Pro Asp Ser Gly Arg
 1 5

 <210> 46
 <211> 10
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <400> 46
 Arg Asn Ile Ala Glu Ile Ile Lys Asp Ala
 1 5 10

 <210> 47
 <211> 4
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 47
 Arg Gly Asp Thr
 1

 <210> 48
 <211> 4
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 48
 Asp Gly Glu Ala
 1

 <210> 49
 <211> 4
 <212> PRT
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 <220>
 <223> Based on Homo sapiens

 <221> VARIANT
 <222> (1) ... (4)

<223> Xaa is any amino acid

<400> 49

Val Thr Xaa Gly

1

<210> 50

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens

<221> VARIANT

<222> (1)...(6)

<223> Amino acids at positions 1, 4, and 6 are Met, Leu, Ala, Ile, Val, Phe, or Pro; amino acids at positions 2, 3, and 5 are Arg or Lys

<400> 50

Xaa Xaa Xaa Xaa Xaa Xaa

1

5

<210> 51

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens

<400> 51

Pro Arg Arg Ala Arg Val

1

5

<210> 52

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens

<400> 52

Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg

1

5

10

15

Pro Gly Val

<210> 53

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens

<400> 53
 Arg Pro Ser Leu Ala Lys Lys Gln Arg Phe Arg His Arg Asn Arg Lys
 1 5 10 15
 Gly Tyr Arg Ser Gln Arg Gly His Ser Arg Gly Arg
 20 25

<210> 54
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens

<400> 54
 Arg Ile Gln Asn Leu Leu Lys Ile Thr Asn Leu Arg Ile Lys Phe Val
 1 5 10 15
 Lys

<210> 55
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens

<400> 55
 Lys bAla Phe Ala Lys Leu Ala Ala Arg Leu Tyr Arg Lys Ala
 1 5 10

<210> 56
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens

<400> 56
 Lys His Lys Gly Arg Asp Val Ile Leu Lys Lys Asp Val Arg
 1 5 10

<210> 57
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens

<400> 57
 Tyr Lys Lys Ile Ile Lys Lys Leu
 1 5

<210> 58
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 58
Gly Cys Tyr Lys Asn Arg Asp Cys Gly
1 5

<210> 59
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 59
Gly Cys Asp Asp Gly Pro Gln Gly Ile Trp Gly Gln Asp Asp Cys Gly
1 5 10 15

<210> 60
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 60
Gly Cys Arg Asp Gly Pro Gln Gly Ile Trp Gly Gln Asp Arg Cys Gly
1 5 10 15

<210> 61
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<400> 61
Gly Cys Gly Tyr Gly Arg Gly Asp Ser Pro Gly
1 5 10

<210> 62
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Based on Homo sapiens

<221> VARIANT

<222> (1)...(10)
 <223> Gly at position 1 is acetylated

 <400> 62
 Gly Cys Gly Tyr Gly Arg Gly Asp Ser Pro
 1 5 10

 <210> 63
 <211> 13
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 63
 Gly Asp Gly Ser Gly Tyr Gly Arg Gly Asp Ser Pro Gly
 1 5 10

 <210> 64
 <211> 9
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 64
 Gly Cys Gly Tyr Gly Arg Gly Asp Ser
 1 5

 <210> 65
 <211> 13
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <400> 65
 Gly Lys Lys Lys Gly Cys Tyr Lys Asn Arg Asp Cys Gly
 1 5 10

 <210> 66
 <211> 9
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Based on Homo sapiens

 <221> VARIANT
 <222> (1)...(9)
 <223> Xaa at position 4 is dextrorotatory Lys, and Xaa at position 6 is
 dextrorotatory Arg

 <400> 66

Gly Cys Tyr Xaa Asn Xaa Asp Cys Gly
 1 5

<210> 67

<211> 13

<212> PRT

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<220>

<223> Based on Homo sapiens

<400> 67

Gly Cys Cys Gly His His His His His Gly Cys Cys Gly
 1 5 10

<210> 68

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens .

<221> VARIANT

<222> (1)...(9)

<223> Xaa at position 4 is dextrorotatory Lys, and Xaa at position 6 is dextrorotatory Arg

<400> 68

Gly Cys Tyr Xaa Asn Xaa Asp Cys Gly
 1 5

<210> 69

<211> 156

<212> PRT

<213> Artificial Sequence

<220>

<223> Based on Homo sapiens

<400> 69

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Arg	Gly	Ser	His	Met	Lys	Asp	Pro	Lys	Arg	Leu	Tyr	Arg	Ser	Arg	Lys
			20					25					30		
Leu	Pro	Val	Glu	Leu	Glu	Ser	Ser	Ser	His	Pro	Ile	Phe	His	Arg	Gly
		35					40					45			
Glu	Phe	Ser	Val	Cys	Asp	Ser	Val	Ser	Val	Trp	Val	Gly	Asp	Lys	Thr
	50				55						60				
Thr	Ala	Thr	Asp	Ile	Lys	Gly	Lys	Glu	Val	Met	Val	Leu	Gly	Glu	Val
65				70					75					80	
Asn	Ile	Asn	Asn	Ser	Val	Phe	Lys	Gln	Tyr	Phe	Phe	Glu	Thr	Lys	Cys
			85					90					95		
Arg	Asp	Pro	Asn	Pro	Val	Asp	Ser	Gly	Cys	Arg	Gly	Ile	Asp	Ser	Lys
			100					105					110		
His	Trp	Asn	Ser	Tyr	Cys	Thr	Thr	Thr	His	Thr	Phe	Val	Lys	Ala	Leu
		115					120						125		

Thr Met Asp Gly Lys Gln Ala Ala Trp Arg Phe Ile Arg Ile Asp Thr
 130 135 140
 Ala Cys Val Cys Val Leu Ser Arg Lys Ala Val Arg
 145 150 155

<210> 70
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 <212> DNA
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<220>
 <223> Based on Homo sapiens

<400> 70
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 tctgtatggg taggcgataa aaccactgcc actgatatca aaggcaaaga ggtgatgggtg 180
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 taaggatcc 429

<210> 71
 <211> 17
 <212> PRT
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<220>
 <223> Based on Homo sapiens

<400> 71
 Gly Cys Gly Lys bAla Phe Ala Lys Leu Ala Ala Arg Leu Tyr Arg Lys
 1 5 10 15
 Ala

<210> 72
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Based on Homo sapiens

<221> VARIANT
 <222> (1)...(5)
 <223> Xaa is any amino acid

<400> 72
 Xaa Xaa Xaa Xaa Tyr
 1 5
 17
 17